

Att. 23,939  
53,1

IN THE SPECIFICATION

Please replace the first full paragraph on page 4 (lines 1-2) with the following paragraph:

FIG. 4A shows one embodiment for illustrative purposes a cross section of the thin film circuitry.

A1

Please add the following paragraph after the first full paragraph on page 4:

FIG. 4B is a block diagram showing the embodiment of FIG. 4A.

A2

Please replace the third full paragraph on page 7 (lines 26-31) and continuing to the first partial paragraph of page 8 (lines 1-7) with the following paragraph:

Sub B1

FIG. 4A illustrates a cross section of a portion of the printhead 100 of FIG. 1 in one embodiment, for illustrative purposes only. FIG. 4B is a block diagram showing the embodiment of FIG. 4A. The layers of FIG. 4A are presented as an illustration and are not to scale. Referring to FIG. 1 and FIG. 2 along with FIGS. 4A and 4B, in one embodiment, the primitives 1-n 108, 110 are made of thin films and include an orifice plate 315 with nozzles 318 mounted on a barrier 375 that is coupled to a thin film circuit 401. Also included is a metal stack 403 comprised of a first metal layer 402 and a second metal layer 404. The first metal layer 402 can be Aluminum Copper Silicon. The second metal layer 404 includes plural power vias 406 (FIG. 4A illustrates one power via 406 and one resistor 112 for illustrative purposes only) and includes a top conductive metal 400, which can be Aluminum, and a bottom metal barrier 407, which can be Tantalum Aluminum. Resistor 112 is defined by a portion of the top conductive metal 400 and the bottom metal barrier 407. The separation barrier 408 is defined by a bottom portion of the power via 406 that is adjacent to the first metal layer 402. Also, other layers 411 are included, but are not described here for simplicity.

A3

Please replace the second full paragraph on page 8 (lines 8-17) with the following paragraph:

Sub B2

The power vias 406 form an interface between the first metal layer 402 and the second metal layer 404 for providing power and control to the resistors 112. Also, the power vias 406 form a blockade between the second metal layer 404 and a